

## REMARKS

Claim 9 has been cancelled. Claims 1, 3-6, 10, 12-14, 16-17, 19-23, 25, 27-33, 37, 40-43, 45, 47-51, 53, 55-57, 59-60, and 62-67 have been amended. New Claims 68-76 have been added. Claims 1-3, 5-8, and 10-76 are now in the application. Applicant submits that all amendments are supported by the application-as-filed and that no new matter has been added.

### Election/Restriction

Regarding the Restriction Requirement, the examiner stated:

*"Figure 9 does not appear to show at least all except for to [two] of said bone-fastener-receiving apertures comprising of slots, thus enabling longitudinal movement of such bone fasteners in said slots".*

Applicant must respectfully disagree. The critical language is as follows:

*at least all except for to [two] of said bone-fastener-receiving apertures comprising of slots.*

We start with at least all except two...comprising slots. Applicant submits that this statement should be interpreted as a basic statement that all apertures are slots, and a qualification [*at least...except two*] of that statement that up to two of the apertures are permitted to be other than slots, for example circular. The critical language in no way requires that any of the apertures be circular, or anything else other than slotted. Rather, the language is permissive of all slots, all slots except 1 non-slotted aperture, and all slots except 2 non-slotted apertures.

Turning now to FIGURE 9, all of the apertures are slots, which is within the scope of the critical language. Accordingly, Applicant reaffirms its position that all of the claims are within the scope of the elected species.

Nevertheless, the point of the restriction is of limited importance in the context of the examination in that all of the withdrawn claims are dependent claims, which will necessarily be rejoined into the examination process once the claims from which they depend are found to be allowable. Namely, withdrawn Claims 14-15 and 36-40 depend from allowable Claim 1.

Finally, Applicant does not understand why Claims 36-39 stand withdrawn. These claims have none of the characteristics upon which the examiner relied for restricting any claims. Accordingly, at minimum, the examiner is required to either state a basis for such restriction or rejoin Claims 36-39 into the examination process. Again, however, Applicant expects that this issue will be resolved when Claim 1 is found to be allowable.

#### Double Patenting

All of the claims in issue stand rejected on the ground of non-statutory double patenting over Claims 1-100 in U.S. Patent 6,755,833. A Terminal Disclaimer is submitted herewith, obviating this basis for rejection. Withdrawal of this basis for rejection is respectfully requested.

#### Claim Objections

Claims 9 and 10 stand rejected as being identical to each other. Claim 9 has been canceled, obviating this basis of rejection. Withdrawal of this basis for rejection is respectfully requested.

#### Rejections of Claims Under 35 USC § 102

Claims 1, 9-11, 22-24, 59, and 67 stand rejected as being anticipated by Errico et al (U.S. Patent No. 5,876,402). Applicant respectfully traverses the rejection.

Claim 9 has been canceled, obviating the rejection of Claim 9.

Regarding the remaining claims, independent Claim 1 has been amended for clarification to recite, among other things, that the retaining element extends along the space which divides the apertures from each other. Specifically, Claim 1 now recites the

retaining element extending from a first said one of said bone-fastener-receiving apertures to a second said one of said bone-fastener-receiving apertures

Applicant submits that Errico is devoid of such structure whereby Claim 1, and Claims 10-11 and 22-24 dependent therefrom, are allowable over Errico et al. Withdrawal of the rejection of Claims 1, 10-11, and 22-24, based on Errico et al, is respectfully requested.

Turning now to the rejection of independent Claim 59, Claim 59 has been amended to specifically recite a bone fastener, such as a bone screw, and the cooperative relationship between the bone fastener and the retaining band. Thus Claim 59 recites

at least one bone fastener comprising a shank, and blocking structure, said **blocking structure on said bone fastener**, when said bone fastener is being driven through a said aperture and into such bone structure of a recipient user, engaging said retaining band and displacing said retaining band laterally....

Applicant submits that Errico et al do not teach or suggest any blocking structure on the bone fastener. Rather, Errico et al introduces an additional element, namely Errico's coupling element 132, which serves as an interface between the bone fastener [screw] and the retaining element [snap ring].

By contrast, Applicant's Claim 59 teaches a less complex solution to the matter of screw retention by providing an interface directly between the bone screw and the retainer. Errico specifies that the size of the head of the screw must be less than the size of the opening in the snap ring, and that the head is captured and retained by the coupling element. Further, to modify the head of the screw of Errico to interface directly with the snap ring would be detrimental to the "polyaxial" function desired of the Errico screw.

Accordingly, Applicant submits that Errico neither teaches nor suggests Applicant's invention as claimed in Claim 59 whereby Claim 59, and Claim 67 dependent therefrom, are allowable over Errico et al. Withdrawal of the rejection of Claims 59 and 67, based on Errico et al is respectfully requested.

Claims 1, 12, 18, 41-43, 48-51, and 58 stand rejected as being anticipated by Needham et al (U.S. Patent No. 6,533,786). Applicant respectfully traverses the rejection.

Claim 1 recites, among other things,  
a resiliently transversely movable retaining element.

By "resilient", Applicant means that the retaining element moves to cover a bone screw, and thus to interfere with withdrawal of the bone screw, at least in part by means of a readily discernible flexing and/or straightening movement of the retaining band, without moving the entirety of the retaining band as an entity.

By "transverse", Applicant means that the retaining element moves to cover a bone screw, and thus to interfere with withdrawal of the bone screw, by moving in a direction which is transverse to the longitudinal dimension of the respective spinal plate.

Now applying the above interpretations to the reference, Applicant submits that the retaining element of Needham et al is represented by the various implementations of Needham's washer 90. See, for example, Needham FIGURES 5a, 5b, 5c, 5d, and 5e. Further, see the use of the washer illustrated in the assembly drawings by comparing Needham's FIGURES 1 and 2. As illustrated and taught in Needham, washer 90 is moved longitudinally to cover the bone screws. Washer 90 is not moved transversely. Further, Needham is silent as to any "resilient" property in his washer, and is thus defective to teach the claimed resilient property.

Accordingly, Applicant submits that Needham et al neither teaches nor suggests Applicant's invention as claimed in Claim 1 whereby Claim 1, and Claims 12, and 18 dependent therefrom, are allowable over Needham et al.

Withdrawal of the rejection of Claims 1, 12, and 18, based on Needham et al, is respectfully requested.

Turning now to independent Claim 41, Claim 41 recites, among, other things

channel (26) expressed intermittently along the length of said spinal plate; and  
a resiliently transversely movable retaining band mounted to said spinal plate, said resiliently transversely movable retaining band moving transversely....

Turning now to the Office Action, the examiner states erroneously that the *retaining element comprises a resiliently movable band* [Office Action page 5, middle of the page]. The examiner does not indicate what about Needham makes his washer resilient. Needham does not state that his washer is resilient. One can, of course, take the position that all materials have a "resilient" element so long as the Young's modulus is not exceeded. However, as stated above, Applicant is using the word "resilient" in its common context to refer to materials which act in ways which are commonly recognized as resilient properties. Thus:

By "resilient", Applicant means that the retaining element moves to cover a bone screw, and thus to interfere with withdrawal of the bone screw, at least in part by means of a readily discernible flexing and/or straightening movement of the retaining band, without moving the entirety of the retaining band as an entity.

Also, as stated above, by "transverse", Applicant means that the retaining element moves to cover a bone screw, and thus to interfere with withdrawal of the bone screw, by moving in a direction which is transverse to the longitudinal dimension of the respective spinal plate.

Needham et al clearly teach that washer 90 moves longitudinally of the plate to cover the bone screws. By contrast, Claim 41 recites the retaining band moving transversely back toward the first position and into interfering relationship with such bone fastener.

Finally, the examiner stated that

*Needham et al. also disclose an intermittent channel (39) extending along the length of the spinal plate.*

Applicant respectfully traverses this statement. Contrary to the examiner's statement, Needham shows a channel/groove 39 which extends continuously at a constant depth along the full length of the plate. See, for example, Needham's FIGURES 4a, 4b, 4c, 4d, 4e, for end views. FIGURE 11 shows a modestly elevated pictorial end view of the plate, which well illustrates the channel as extending the full length of the plate, at a constant depth. No drawing, no teaching, no suggestion in Needham et al would lead one of ordinary skill in the art toward an intermittent channel. Accordingly, Applicant continues to rely on the intermittent nature of the channel as one of multiple points of novelty in Claim 41, with respect to Needham et al.

In light of all of the above, Applicant submits that Needham et al neither teaches nor suggests Applicant's invention as claimed in Claim 41 whereby Claim 41, and Claims 42-43 and 48-50, dependent therefrom, are allowable over Needham et al. Withdrawal of the rejection of Claims 41-43 and 48-50, based on Needham et al, is respectfully requested.

Turning now to independent Claim 50, Claim 50 recites

*a resiliently transversely movable retaining band mounted to said spinal plate, ...*

*moving transversely from a first position when an interfering bone fastener is driven through a said aperture...and past said retaining band...*

*thus moving said retaining band transversely from the first position...*

*said resiliently transversely movable retaining band moving transversely back toward the first position after disengagement of such bone fastener from said retaining band, thereby to activate a blocking feature of said spinal plate assembly....*

Referring again to the definitions recited above, Needham et al do not teach or suggest a resiliently movable band. Needham et al do not teach or suggest a band which moves transversely, e.g. to activate a blocking feature of the spinal plate assembly.

In light of the above, Applicant submits that Needham et al neither teaches nor suggests Applicant's invention as claimed in Claim 50 whereby Claim 50, and Claims 51 and 58, dependent therefrom, are allowable over Needham et al. Withdrawal of the rejection of Claims 50, 51, and 58, based on Needham et al, is respectfully requested.

Claims 1, 12, 19, 50, 51, and 58 stand rejected as anticipated by Assaker et al (U.S. Patent No. 6,653,525 [sic 5,652,525]). Applicant respectfully traverses the rejection.

Claim 1 recites a resiliently transversely movable retaining element.

Again the examiner erroneously states that Assaker's retaining element is resilient. Again Applicant relies on the common understanding of the word "resilient" as recited above.

In addition, Applicant points out that Assaker's retaining element/slide 22 does not, cannot, move transversely. Rather, Assaker's slide moves longitudinally of the plate. Indeed, the entire slide is moved, such that there is no reliance on any resilient movement, indeed no capacity for resilient movement to let the bone screw pass the retaining element. There is no resilient movement of the slide to move back over the bone screw after the bone screw has moved past the slide.

In light of the above, Applicant submits that Assaker et al neither teaches nor suggests Applicant's invention as claimed in Claim 1 whereby Claim 1, and Claims 12 and 19, dependent therefrom, are allowable over Assaker et al. Withdrawal of the rejection of Claims 1, 12, and 19, based on Assaker et al, is respectfully requested.

Claim 50 similarly recites a resiliently transversely movable retaining band, and thus is allowable over Assaker et al for the same reasons as are recited above with respect to allowability of Claim 1.

In light of the above, Applicant submits that Assaker et al neither teaches nor suggests Applicant's invention as claimed in Claim 50 whereby Claim 50, and Claims 51 and 58, dependent therefrom, are allowable over Assaker et al. Withdrawal of the rejection of Claims 50, 51, and 58, based on Assaker et al, is respectfully requested.

#### Rejection of Claims under 35 USC § 103

Claims 2-8, 13, 20, 21, and 25-35 stand rejected, under 35 U.S.C. 103(a) as being unpatentable over Needham et al 6,533,786. Applicant respectfully traverses the rejection.

Applicant first points out that all of the claims rejected here are dependent claims, whereby such claims are allowable on the basis of the allowability of the claims from which they depend.

The examiner asserts that to select a known material on the basis of its suitability for the intended use is a matter of obvious design choice. Applicant submits that suitability of the recited materials for the intended use was not known. Namely, suitability depends on a variety of parameters such as those recited in e.g. Claim 2, for example, strength, rigidity, and deflection properties, in addition to the safety parameter. While certain materials are known to be safe for use in living bodies, safety alone does not make the material "suitable". Rather, it remained for the Applicant herein to discover that certain ones of the "safe" materials had the other properties which are also needed to satisfy the use intended, especially with respect to the retaining element. Accordingly, the examiner's statement of "obvious design choice" is faulty and must be withdrawn.

Regarding "mere duplication" recited by the examiner with respect to the second retaining band as recited in Claim 20, Applicant submits that the recited cooperation between the first and second bands represents more than "mere



duplication", whereby Claim 20, and all claims dependent therefrom, are patentable over the reference.

In light of the above, Applicant submits that Needham et al neither teaches nor suggests Applicant's invention as claimed in Claims 2-3, 5-8, 13, 20, or 25-35 whereby Claims 2-3, 5-8, 13, 20, and 25-35 are allowable over Needham et al. Withdrawal of the rejection of Claims 2-3, 5-8, 13, 20, and 25-35, based on Needham et al, is respectfully requested.

Turning now to the new claims, new independent Claim 70 recites a resiliently transversely movable retaining band, which moves away from the aperture and away from a side wall of a recess in the spinal plate. No reference teaches or suggests such combination.

New Claim 73 recites a channel communicating with the top surface of the plate, a resiliently transversely movable retaining band, and blocking structure on a bone fastener/screw. The retaining band is effective, when an interfering bone fastener is driven through a respective aperture to automatically resiliently move, thus to activate a blocking feature of the spinal plate assembly. No reference teaches or suggests such combination.

Applicant thus submits that all of the claims are allowable. Early allowance is respectfully submitted.

A Petition to Revive an unintentionally abandoned application is submitted herewith.

A Terminal Disclaimer is submitted herewith.

A fee is due as follows:

Petition to Revive the Application	\$750.
Terminal Disclaimer	180.
2 additional independent claims	200.
8 net total claims	<u>200.</u>
Total amount due	\$1330.

A check in the amount of \$1330 is submitted herewith to pay the various fees listed above. No other fee is believed to be due. Should any fee submitted herewith be insufficient, or should any other fee be properly due, or if any refund is due, kindly charge same, or credit any overpayment, to Deposit Account 23-2130.

Please feel free to contact me with any questions, comments or concerns, at the telephone number listed at the end of this document.

Respectfully submitted,  
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